This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (amended) A magneto-optical imaging method comprising:

- positioning, close to a target material [(2)], a substantially plane face of a magnetic active material [(15)] suitable for producing a Faraday rotation in a polarized light beam,

- generating an exciting magnetic field of angular frequency ω in the target material [(2)],

- directing a polarized incident light beam, through the active material [(15)], toward the target material [(2)],

- detecting, using photodetector means [(7)], a reflected beam corresponding to the reflection on a reflecting surface located between the active material [(15)] and the target material [(2)], and

- observing the angle of Faraday rotation in the reflected beam, with respect to the incident beam, which is created in the active material [(15)] by an interfering magnetic field produced by the target material [(2)],

[characterized in that] wherein:

- the Faraday rotation of the active material [(15)] is substantially proportional to its magnetization when it is subjected to an interfering magnetic field, perpendicular to said face and varying in a minimum range extending between substantially -1 Oersted and substantially +1 Oersted, and [that]

- the value of the magnetization of the active material [(15)], under the effect of the interfering magnetic field, is determined based on the value of the angle of the Faraday rotation.

2. (amended) The method according to claim 1, wherein the exciting magnetic field is generated by means of an inductor [(17)] energized with a variable exciting current.

3. (initial) The method according to claim 2, comprising a measurement, using lock-in detection, of the variation of the phase of the interfering magnetic field with respect to that of the exciting current.

4. (amended) The method according to [one of the preceding claims] claim 1, wherein the amplitude of the interfering magnetic field is measured based on the luminous intensity of the reflected beam.

5. (amended) The method according to [one of the preceding claims] claim 1, wherein the incident beam is amplitude-modulated at the same frequency as that of the exciting field.

6. (amended) A magneto-optical imaging device, for forming an image of a target material [(2)], said device comprising:

- an active material [(15)], comprising a substantially planar face, which is magnetic and suitable for producing a Faraday rotation in a polarized light beam,
- means for generating an exciting magnetic field [(5)] with angular frequency ω in the active material [(15)] and in the target material [(2)], when the imaging device is located close to this target material,

- a light source [(9)] for directing a polarized incident light beam, through the active material [(15)], toward the target material [(2)] when the imaging device is positioned close to this target material [(2)],

- photodetector means [(7)], for detecting a reflected beam corresponding to the reflection, after passage through the active material [(15)], of the incident beam on a reflecting surface,

[characterized in that] wherein the Faraday rotation of the active material is substantially proportional to its magnetization when it is subjected to an interfering magnetic field produced by the target material [(2)], perpendicular to said face and varying in a minimum range extending between substantially -1 Oersted and substantially +1 Oersted.

7. (amended) The device according to claim 6, comprising:

- an inductor [(17)] energized with a variable exciting current, for generating the exciting magnetic field, and

- modulation means of the incident beam for amplitude-modulating the latter at the same frequency as that of the exciting field.

8. (amended) The device according to [claims 6 and] claim 7, comprising calculation means for determining, based on the value of the angle of the Faraday rotation, the value of the magnetization of the active material]l [(15)] under the effect of an interfering magnetic field produced in the active material [(15)] by the target material [(2)], when the imaging device is positioned close to this target material [(2)].